

Matrox® MuraControl™ for Windows®

User Guide (for software version 3.00)

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Graphics for Professionals

Contents

1	About this user guide	4
1.1	Using this guide	4
1.2	More information	4
2	Overview	5
2.1	Features	5
2.2	Hardware required	5
3	Installing MuraControl software	6
3.1	Before you begin	6
4	Getting started with MuraControl	7
4.1	Accessing MuraControl	7
4.2	Connecting to the controller	7
4.3	Understanding the main interface	8
4.4	Understanding the canvas	8
4.5	Using the canvas	8
5	MuraControl	10
5.1	Connecting to the controller	10
5.2	MuraControl settings	11
5.3	Stopping the appliance	12
5.4	About	12
5.5	Exit	12
6	Layouts	13
6.1	Layout management options	13
6.2	Settings	13
6.3	Changing the layout	15
6.4	Locking the layout	16
6.5	Managing multiple layouts	16
6.6	Importing and exporting a layout	16
6.7	Marquee	17

7 Windows	18
7.1 Window management options.....	18
7.2 Defining the Z-order of a window	18
7.3 Settings.....	19
7.4 Pinning a window	23
7.5 Size.....	23
7.6 Sources.....	23
8 Sources	24
8.1 Source management options	24
8.2 Adding a source.....	25
8.3 Settings.....	27
8.4 Inactive stream	32
8.5 Show side panel	32
9 View	33
9.1 Show or hide.....	33
9.2 Snap to	33
9.3 Grid.....	33
9.4 Grid lines.....	34
9.5 Output labels	34
10 Schedules	35
10.1 Recurring layouts.....	35
10.2 Scheduled layouts	36
11 Troubleshooting	37
11.1 Common problems and solutions	37
12 Appendix – Creating a display wall layout.	38
12.1 Step-by-step configuration	38
13 Notes	40
13.1 General	40
13.2 Sources.....	40
14 Customer support	41
14.1 Matrox Web	41
14.2 Technical support	41

1 About this user guide

Your Matrox user guide provides information on installing and using Matrox MuraControl for Windows software. This guide also provides information on MuraControl features and options.



Note: This guide has references specific to version 3.00 of Matrox MuraControl for Windows. If you're using a previous version of the Matrox driver, certain references in this guide may not reflect the software you have.

1.1 Using this guide

This guide assumes you're familiar with basic functions like click, right-click and double-click, and that you're familiar with the basics of the operating system you're using. Also, we use the following conventions:

- **Bold** for headings and for references to text that appears on-screen.
- *Italics* for emphasis, file names, paths, publication titles, and new terms.
- ***Bold Italics*** for emphasis.
- Keyboard keys in square brackets, with a plus sign separating keys that you press simultaneously. For example: press [Ctrl]+[Alt]+[Del] to start Windows Task Manager.
- Arrows (“→”) to separate ordered directions. For example, “click **OK** → **Close** → **OK**” is the same as “click **OK**, then click **Close**, then click **OK**”.
- **Green** for cross-references. If you're viewing online, click green text to jump to what's being referenced.

1.2 More information

This guide assumes your Matrox Mura MPX Series product is properly connected. For more information on the connection setup of your product, see your Matrox Mura MPX Series user guide.

We provide additional information in help and *Readme* files. Be sure to check for any last-minute release notes included with your product. Also, check the Matrox Web site (www.matrox.com/graphics) for the latest Matrox software, technical support, and product information.

2 Overview

Matrox MuraControl for Windows is a program that enables you to manage your Matrox Mura MPX-based display wall. You can use MuraControl software to create, save, and edit layouts so your source content appears where and how you want it.

2.1 Features

Matrox MuraControl for Windows software supports the following features:

- Run the software locally or remotely.
- Create, save, rename, copy, and delete layouts.
- Import or export layouts.
- Position, re-size, crop, and label windows anywhere on the display wall.
- Rename, crop, rotate, and apply color, text overlay, and de-interlacing filters to source content.
- Adjust source-specific hue, saturation, brightness, and contrast color correction parameters.
- Add and control external applications (such as VLC®, VNC®, and Microsoft® PowerPoint®), Web pages, HTML5 sources, and images on the display wall.
- Create layout schedules to automatically switch from one layout to another.
- Identify Mura MPX controllers within the local subnet using UPnP (Universal Plug and Play).

2.2 Hardware required

To run Matrox MuraControl for Windows, the following hardware is required:

- Matrox Mura MPX Series hardware
- USB dongle (software license)

3 Installing MuraControl software

This section describes how to install Matrox MuraControl for Windows.

3.1 Before you begin

To be able to install and run MuraControl, the following must be installed:

On the Mura system (where Mura MPX cards are installed)	<ul style="list-style-type: none">▪ Matrox Network API▪ Microsoft Windows 7 (64-bit) and Windows Server 2008 R2▪ Matrox driver version 2.04.01 or later*
On the client system (where MuraControl for Windows is installed)	<ul style="list-style-type: none">▪ Microsoft .NET Framework 4.0▪ Microsoft Windows XP (32-bit or 64-bit), Microsoft Windows 7 (32-bit or 64-bit), Windows Server 2008 R2, Microsoft Windows 8 (32-bit or 64-bit), and Microsoft Windows 8.1 (32-bit or 64-bit)

* Depending on the driver version you're using, certain options documented in this guide may not be available.

To run MuraControl for Windows, you must be using Matrox Mura MPX Series hardware.

3.1.1 Obtaining MuraControl software

Matrox MuraControl for Windows software is available for download on the Matrox Web site (www.matrox.com/graphics/en/products/display_wall/mura_mpx_series/muracontrol/windows).

3.1.2 Installing MuraControl software

To install Matrox MuraControl for Windows on the remote system (client), launch *MuraControlSetup.msi*, then follow the on-screen instructions.

3.1.3 USB dongle

A 21-day free trial of Matrox MuraControl for Windows is available for download. Following the expiry of the 21-day free trial, you must purchase a software license in the form of a USB dongle to continue using MuraControl for Windows software.

To purchase a software license, contact your Matrox representative.

4 Getting started with MuraControl

This section describes how to access MuraControl software and provides an overview of the main interface.

4.1 Accessing MuraControl

To access Matrox MuraControl:

- Click the **MuraControl** icon () on your desktop.
- Click **Start** → **All programs** (or **Programs**) → **Matrox Graphics** → **MuraControl for Windows** → **MuraControl for Windows**.

4.2 Connecting to the controller

To be able to run MuraControl, you'll need to enter the IP address, port, and password (if one was specified) of the controller you want to connect to. When you're done, click **OK**.

Entering an IP address	When you start MuraControl for the first time, you'll be prompted to manually enter the IP address of the controller you want to connect to. If you don't enter an IP address, you'll be prompted each time you start the application until you enter a valid IP address. Once a valid IP address is entered, the IP address is automatically saved. If UPnP is enabled, the controllers currently on the subnet will be automatically discovered. To connect to a controller, select the controller from the drop-down list that appears. If you want to run MuraControl on the Mura controller, enter "localhost" as your IP address.
Entering a port	Enter the port address of the controller. If you never changed the port on your Mura MPX controller, we recommend leaving it at 23.
Entering a password	If the controller you want to connect to is password protected, MuraControl will use the password entered, if one was specified. If the password specified is invalid, you'll be prompted to specify a new password.

To open MuraControl settings, click **Settings**.

4.3 Understanding the main interface

MuraControl features and controls are divided into categories on the main interface of Matrox MuraControl.

The available categories are:

- **MuraControl** – Connect to a controller and specify the settings for your MuraControl software. (See “5 - MuraControl”, page 10.)
- **Layouts** – Configure and manage your layout, specify the settings of your layout, and make your layout active on the Mura MPX-based display wall. (See “6 - Layouts”, page 13.)
- **Windows** – Manage your stream windows and modify the properties of your windows. (See “7 - Windows”, page 18.)
- **Sources** – Modify the settings for your sources. (See “8 - Sources”, page 24.)
- **View** – Create grids and grid lines to help you better position your windows and configure your layout. (See “9 - View”, page 33.)
- **Schedules** – Schedule your layouts to change at specified times. (See “10 - Schedules”, page 35.)

4.4 Understanding the canvas

The MuraControl canvas enables you to manually create your layout and to preview it before making the layout active on your Mura MPX-based display wall. That is, you can use the canvas to manipulate the layout of your displays and to visualize how your displays appear on your display wall.

4.4.1 Adjusting the settings of your layout

The area in the bottom right-hand corner of the canvas enables you to adjust the zoom level.

You can also view the display resolution and position of your window. To change the display resolution and position of your window, see “7.3 - Settings”, page 19.

4.5 Using the canvas

This section describes how to use your canvas to manually configure your display wall layout. By dragging your windows, you can rearrange your canvas to more closely match the physical arrangement of your monitors.

4.5.1 Shortcut menu

Use the shortcut menu to quickly modify your display wall layout.

To access the shortcut menu, right-click the windows on your layout. The menu items include:

Delete	Delete a window from your layout. This option also deletes the marquee text from your layout.
Marquee	Add a marquee to your display wall.
Play	Play an application source.
Pause	Pause an application source that's playing.
Size	Select a predefined size or specify a custom size for your window, or choose to have your window fit your display wall.
Source	Select a source.
Source settings	View and modify the settings of your input stream.
Window settings	View and modify the settings of your window.
Z-order	Select which windows are in the foreground and which are in the background.

5 MuraControl

This section provides information on your MuraControl settings and explains how to connect to a controller.

5.1 Connecting to the controller

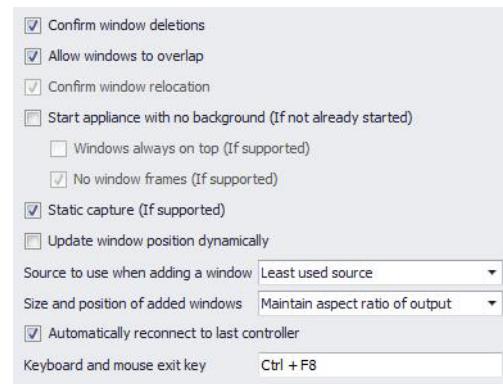
IP address	When you start MuraControl for the first time, you'll be prompted to manually enter the IP address of the controller you want to connect to. If you don't enter an IP address, you'll be prompted each time you start the application until you enter a valid IP address. Once a valid IP address is entered, the IP address is automatically saved. If UPnP is enabled, the controllers currently on the subnet will be automatically discovered. To connect to a controller, select the controller from the drop-down list that appears. If you want to run MuraControl on the Mura controller, enter "localhost" as your IP address.
Port	Enter the port address of the controller. If you never changed the port on your Mura MPX controller, we recommend leaving it at 23.
Password	If the controller you want to connect to is password protected, MuraControl will use the password entered, if one was specified. If the password specified is invalid, you'll be prompted to specify a new password.

5.1.1 Recent controllers

This lists the most recently used controllers. To connect to a recently used controller, click the controller you want to open.

5.2 MuraControl settings

MuraControl settings enable you to manage your windows and controllers.



Confirm window deletions	This prompts for confirmation every time a window is deleted from the layout.
Allow windows to overlap	This enables windows to overlap one another.
Confirm window relocation	This prompts for confirmation when a window is moved to another location in the layout.
Start appliance with no background (If not already started)	If the appliance isn't already started, enable this option to start the appliance without a background. Otherwise, the appliance starts with the default black background. <ul style="list-style-type: none">▪ Windows always on top (If supported) – Enable this to have your MuraControl windows (your stream windows) always stay on top of other windows. This option is supported only if Start appliance with no background is enabled.▪ No window frames (If supported) – Enable this to remove the window frames. This option is supported only if Start appliance with no background is enabled.
Static capture (If supported)	Enable this to prevent the automatic reconfiguration of streams. Enabling this optimizes the capture process, but may affect rendering performance.
Update window position dynamically	This enables you to instantly see where the window is being moved on the Mura MPX-based display wall.
Source to use when adding a window	You can select one of the following options: <ul style="list-style-type: none">▪ No source – No source used. A window is added and labeled None.▪ Least used source – Use the least used source to the window added.▪ Prompt – Prompt to select the source to use from a list of sources.

Size and position of added windows	Select how windows are scaled when they're added to your layout. You can select one of the following options: <ul style="list-style-type: none"> ▪ Maintain aspect ratio of source – Use the aspect ratio of the source for the window. ▪ Maintain aspect ratio of output – Use the aspect ratio of the output for the window. ▪ Use mouse – Use your mouse cursor to manually size and position the window.
Automatically reconnect to last controller	This enables you to automatically reconnect to the most recently used controller every time you start MuraControl.
Keyboard and mouse exit key	Define a key combination to exit the virtual keyboard and mouse on your display wall when playing an application source.

5.3 Stopping the appliance

Click **Stop the appliance** to stop your appliance. You'll be prompted to confirm your selection.

5.3.1 Starting the current appliance again

Once your appliance has stopped, the software will be locked until you start the appliance again. To start your appliance again, click **Start the current appliance again**.

5.3.2 Connecting to a different appliance

If you want to connect to a different appliance, click **Connect to a different appliance**. You'll be prompted to enter an IP address and port for the new appliance you want to connect to. You may also be prompted to enter a password, if one was specified.

5.3.3 Stopping MuraControl

Click **Stop MuraControl** to stop and exit MuraControl software.

5.4 About

Provides information specific to your MuraControl software (such as the version).

5.5 Exit

Click **Exit** to exit and close MuraControl.

6 Layouts

This enables you to configure and manage your layout, specify the settings of your layout, and make your layout active on the Mura MPX-based display wall.

6.1 Layout management options

The following describes the basic functions of managing your layouts.

Creating	Click the New () icon, enter a name for your new layout, then click OK . The name field can't be left blank.
Renaming	Click the Rename () icon, enter a new name for your layout, then click OK .
Copying	Click the Copy () icon, enter a name for the layout you want to copy, then click OK .
Deleting	Click the Delete () icon, then click Yes to delete the layout.
Clearing	Click the Clear () icon, then click Yes to clear the windows from a layout.

6.2 Settings

The settings enable you to change the appearance of your layout. To view these settings, click the **Settings** () icon.

6.2.1 Background



Note: Depending on the driver you're using, certain options may not be available.

6.2.1.1 Background color

The background color of your layout. You can select one of the following options:

Custom	Create a custom color setting using the color palette.
---------------	--

6.2.1.2 Images



Note: This option is available only if windows have been added to the layout.

The background image of your layout. Background images are used at their original resolution and are neither scaled nor tiled on your layout.

To upload images to your appliance:

- 1 Enter a URI or browse to *C:\ProgramData\Matrox Graphics Inc\Window Manager*. (If this folder is hidden, see your Windows documentation for information on how to show hidden folders and files.)
- 2 Under **Window Manager**, create a folder called *Images*, and move your images to this folder. (MuraControl software supports PNG and BMP file formats.)

After images have been uploaded to your appliance:

- 1 Launch **MuraControl**.
- 2 Under **Layouts** → **Settings** → **Background**, select the image you want to use, then enter the **Position** (**X**, horizontal and **Y**, vertical) for your image.
- 3 When you're done, click **OK**.

6.2.1.3 Blending type



Note: Depending on the blending type selected, the options available may change.

Select one of the following blending types:

Default	The image is opaque. This is the default setting.
Solid	The image is opaque.
Alpha blended	The image is blended with the source content.
Source color key	The image is opaque. The image content that matches the source color key is transparent.
Source color key and alpha blended	The image is blended with the source content. The image content that matches the source color key is transparent.
Destination color key	The content that matches the color key is replaced with the corresponding pixels from the source content.

6.2.1.4 Color key

This can be either **Source color key** or **Destination color key**, depending on the blending type selected.

6.2.1.5 Transparency

Adjust the transparency level for your window.

6.2.2 Border

You can change the appearance of your window borders depending on your needs.

Style	The border style for the windows in your layout. You can select one of the following options: <ul style="list-style-type: none">▪ None – No border is applied.▪ Solid – A solid border is applied.▪ Bumped – A rounded border is applied.
Color	The RGB color of the window border. To select a color, click the color button. This setting has no effect if the border style is set to None .
Size	The width, in pixels, of your window border. This setting has no effect if the border style is set to None .

6.3 Changing the layout

MuraControl allows you to create and preview new layouts, and make them active only when you're ready to go live with your display wall layout.

6.3.1 Preview layout

The MuraControl canvas shows a preview of the layout you're currently configuring. This may not be the active layout. The preview shows the dimensions of each output, the setup of your layout, and the windows in your layout.

6.3.2 Active layout

The active layout is the layout currently in use on the Mura MPX-based display wall.

6.3.3 Make preview layout active

Click the green check mark () icon to set the preview layout as the active layout on the display wall. While a layout is active, the check mark icon turns gray.

6.3.4 Show side panel

With this feature, you can quickly switch between layouts already created. Click the **Show side panel** () icon to view a list of your current layouts on the left-hand side of the screen. When you select a layout from the side panel, the layout is automatically made active.

6.4 Locking the layout

Click the green lock () icon to lock your layout. When a layout is locked, a red lock () appears. While a layout is locked, you can't add, delete, resize, or move your windows. You can only select a different source for your window.

6.5 Managing multiple layouts

This enables you to quickly copy or delete multiple layouts at a time.

6.6 Importing and exporting a layout

Use this option to import or export an existing layout, and apply those settings to another setup.

6.6.1 Exporting

To export an existing layout:

- 1 Click the **Export** () icon.
- 2 Browse to the destination folder where you want to save your layout.
- 3 Enter a name for the layout file you want to export, then click **Save**.

6.6.2 Importing

To import an existing layout:

- 1 Click the **Import** () icon.
- 2 Browse to the folder that contains the layout file.
- 3 Select the layout file you want to import, then click **Open**.

6.7 Marquee

Use this to add, edit, and manage scrolling text (marquee) across your Mura MPX-based display wall.

6.7.1 Adding and deleting a marquee

To add a marquee:

- 1 Click the **Marquee** icon ().
- 2 Specify the options for your marquee.
- 3 When you're done, click **OK**.

To delete a marquee:

- 1 Select the marquee window in your preview layout.
- 2 Right-click the window, then click **Delete**. You may be prompted to confirm your change.

6.7.2 Marquee options

This enables you to create a marquee across the entire display wall.

To customize the look of your marquee, you can adjust the following settings:

Marquee text	Type the text for your marquee.
Alignment	The Top , Middle , or Bottom alignment of your marquee text. The default is Top .
Height	The height of the marquee text. The default is set to 10% of the vertical resolution of the display wall.
Text color	The RGB color used for the marquee. The default is white.
Transparent	This enables the transparency for the marquee text.
Background color	The RGB color used for the background. To select a color, click the color button. The default is black.
Font name	The font used for the marquee text. The default is Arial .
Scroll speed	The scrolling speed of your marquee text. The default is 1 .
Blink	This enables your marquee text to blink.
Blink on and off	This sets the blinking rate (on and off) for the marquee text.

7 Windows

This section describes how to manage your windows and modify the properties of your windows.

7.1 Window management options

The following describes the basic functions of managing your windows.

Adding	Click the Add () icon. If no free space is available on the wall, other windows will be resized and moved to make room for the new window. If the Use mouse option was selected, you can use your mouse to add a window. For more information, see “5.2 - MuraControl settings”, page 11.
Deleting	Select the window you want to delete, then click the Delete () icon.

7.2 Defining the Z-order of a window

If windows are overlapping, you may need to control which windows are in the foreground and which are in the background.



Note: This option is available only if windows have been added to the layout.



Note: This option is also only available if the windows are overlapping. To enable window overlapping, enable the **Allow windows to overlap** option. For more information, [see “5.2 - MuraControl settings”, page 11.](#)

The options available in this menu vary depending on whether windows are over or under the selected window.

Send to back	Send the windows to the back layer of the windows.
Send backward	Send the windows backward one layer of windows at a time.
Bring to front	Bring the windows to the front layer of the windows.
Bring forward	Bring the windows forward one layer of windows at a time.

7.3 Settings

The properties enable you to change the appearance of your windows. To view these settings, click the **Settings** () icon.

7.3.1 General

This enables you to adjust the general settings for your windows.

Label	<input type="text" value="({Empty Label})"/>
Source	<input checked="" type="radio"/>  <input type="radio"/> Input 1
Left	<input type="text" value="0"/>
Top	<input type="text" value="0"/>
Width	<input type="text" value="1920"/>
Height	<input type="text" value="1080"/>
<input type="checkbox"/> Maintain aspect ratio	
Scaling filter	<input type="text" value="Bilinear"/>

Label	The name of your window.
Source	The source for the stream in the window.
Left, Top	Enter the position (Left, Top) of the window.
Width, Height	Enter the display resolution (Width, Height) for your window.
Maintain aspect ratio	Enable this option to maintain the aspect ratio of your window.
Scaling filter	Choose a scaling filter for your window (Anisotropic , Bilinear , Constant , Gaussian , Nearest , or Pyramidal). The default is Bilinear .

7.3.2 Border

To customize the look of your window border, you can adjust the following settings:

Style	The border for your window. Possible choices are: <ul style="list-style-type: none">▪ Default – The border that was defined for your layout is applied.▪ None – No border is applied.▪ Solid – A solid border is applied.▪ Bumped – A rounded border is applied.
Color	The RGB color of your window border. This setting is disabled if the border style is set to None . To select a color, click the color button.

Size	The width, in pixels, of your window border. This setting is disabled if the border style is set to None .
-------------	---

7.3.3 Cropping

Use this to crop the content of your window. Enter the values, in pixels, to crop the **Left**, **Right**, **Top**, and **Bottom** sides of your window.

Click **Reset** to restore window cropping settings to their default values.

7.3.4 Blending

 **Note:** Depending on the driver you're using, certain options may not be available.

 **Note:** Depending on the blending type selected, the options available may change.

7.3.4.1 Blending type

Select one of the following blending types:

Default	The image is opaque. This is the default setting.
Solid	The image is opaque.
Alpha blended	The image is blended with the source content.
Source color key	The image is opaque. The image content that matches the source color key is transparent.
Source color key and alpha blended	The image is blended with the source content. The image content that matches the source color key is transparent.
Destination color key	The content that matches the color key is replaced with the corresponding pixels from the source content.

7.3.4.2 Color key

This can be either **Source color key** or **Destination color key**, depending on the blending type selected.

7.3.4.3 Transparency

Select the transparency level for your window.

7.3.5 Text overlay

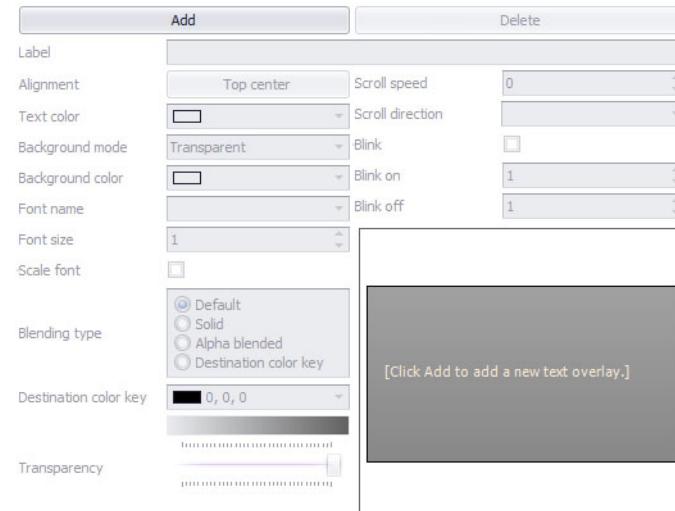


Note: Depending on the driver you're using, certain options may not be available.

Provides full control of your text overlays by enabling you to adjust such settings as the color of the text, the name and size of the font, the placement of the text, and the scroll speed.

7.3.5.1 Text overlay options

To customize the look of your text overlay, you can adjust the following settings:



Add, Delete	To add a text overlay, click Add , then enter your text. To delete a text overlay, select the text you want to delete, then click Delete .
Alignment	The placement of the text overlay. The possible values are: Top left , Top center , Top right , Middle left , Middle center , Middle right , Bottom left , Bottom center , and Bottom right .
Text color	The RGB color of the text overlay. To select a color, click the color button.
Background mode	The background mode for the text overlay. You can select one of the following options: <ul style="list-style-type: none">▪ Transparent – No background.▪ Opaque – Background is limited to behind the text.▪ Opaque full width – Background covers the entire width of the window.

Background color	The RGB color used with an opaque background. If a transparent background is used, this setting is disabled. To select a color, click the color button.
Font name	The font used for the text overlay.
Font size	The size of the font used for the text overlay. The default point size is 24 .
Scale font	Enable this option if you want to scale the font proportionally to the size of the window.
Blending type	Select one of the following blending types: <ul style="list-style-type: none"> ▪ Default – The image is opaque. This is the default setting. ▪ Solid – The image is opaque. ▪ Alpha blended – The image is blended with the source content. ▪ Source color key – The image is opaque. The image content that matches the source color key is transparent. ▪ Source color key and alpha blended – The image is blended with the source content. The image content that matches the source color key is transparent. ▪ Destination color key – The content that matches the color key is replaced with the corresponding pixels from the source content.
Scroll speed	The scroll speed for the text overlay, in the number of pixels the text overlay is moved per frame per second. The default is 0 .
Scroll direction	The scroll direction for the text overlay (Left to right or Right to left).
Blink	Enable this option if you want your text overlay to blink.
Blink on and off	This sets the blinking rate (on and off) for the text overlay.

7.3.6 Image overlay



Note: This option is available only if windows have been added to the layout.

You can use an image as an overlay over the video input. The image overlay is used over the video input at its original resolution.

To upload images to your appliance:

- 1 Enter a URI or browse to *C:\ProgramData\Matrox Graphics Inc\Window Manager*. (If this folder is hidden, see your Windows documentation for information on how to show hidden folders and files.)

- 2 Under **Window Manager**, create a folder called *Images*, and copy your images to this folder. (MuraControl software supports PNG and BMP file formats.)

After images have been uploaded to your appliance:

- 1 Launch **MuraControl**.
- 2 Under **Windows** → **Settings** → **Image overlay**, select the image you want to use, then enter the **Position** (**X**, horizontal and **Y**, vertical).
- 3 When you're done, click **OK**.

7.4 Pinning a window

When the window is pinned, the source maintains the same aspect ratio. Resizing the window crops the source.

When the window isn't pinned, the source scales to the size of the window. Resizing the window doesn't crop the source.

7.5 Size

Use this to select a predefined or a custom size for your window.

Predefined size	This enables you to select a predefined size for your window.
Custom size	This enables you to specify the size of your window. When you're done, click OK .
Fit wall size	This enables you to resize the window to fit your wall.

7.6 Sources

This shows the source for the stream in the window.

8 Sources

This section describes how to add, view, and modify the settings for your sources.

8.1 Source management options

The following describes the basic functions of managing your sources.

Selecting a source	Select a source from the drop down menu.
Adding	To add a source, see “ Adding a source ”, page 25.
Renaming	To rename a source, click Rename , enter a new name for your source, then click OK .
Deleting	To delete a source, select the source you want to delete, then click Delete . Not all source types can be deleted.
Playing	If an application source is added to a window, that window is labeled with an icon to identify the type of source. Depending on your application source, the following icons may appear: <ul style="list-style-type: none">▪ HTML5 ()▪ Image ()▪ PowerPoint ()▪ Source touring ()▪ VLC ()▪ VNC ()▪ Web page () Depending on your source, the following options may also be available: <ul style="list-style-type: none">▪ PowerPoint presentation – Hover over your window and click the Next () or Previous () button. To pause your presentation, click the Pause () button.▪ VLC stream – Hover over your window and click the Play () button. To pause your stream, click the Pause () button.

8.2 Adding a source



Note: Depending on the driver you're using, certain options may not be available.

The following provides information on how to add an application source to MuraControl.

8.2.1 HTML5

- 1 Click **Add**, then enter a name for your source.
- 2 Select **HTML5** for the type of source you want to add, then click **OK**.
- 3 If necessary, adjust the settings, enter the **URL** and modify the **Render mode** for your source.
- 4 When you're done, click **OK**.

8.2.2 Image file

- 1 Click **Add**, then enter a name for your source.
- 2 Select **Image** for the type of source you want to add, then click **OK**.
- 3 If necessary, adjust the settings for your image.
- 4 Browse to the location of your file.
- 5 When you're done, click **OK**.

8.2.3 PowerPoint presentation

- 1 Click **Add**, then enter a name for your source.
- 2 Select **PowerPoint presentation** for the type of source you want to add, then click **OK**.
- 3 Browse to the location of your file.
- 4 When you're done, click **OK**.

8.2.4 Source touring

- 1 This feature enables you to quickly and efficiently cycle through multiple sources.
- 2 Click **Add**, then enter a name for your source.
- 3 Select **Source touring** for the type of source you want to add, then click **OK**.

- 4 A new dialog box will open. Select the **Sources** you want to use, then move them to the **Selected sources** list.
- 5 Set the **Interval** speed, in seconds, to determine how fast you want your sources to cycle.
- 6 When you're done, click **OK**.

8.2.5 VLC stream

- 1 Click **Add**, then enter a name for your source.
- 2 Select **VLC stream** for the type of source you want to add, then click **OK**.
- 3 Browse to the URI protocol where the VLC stream is located.
- 4 Adjust the volume for the file.
- 5 When you're done, click **OK**.

8.2.6 VNC viewer

- 1 Click **Add**, then enter a name for your source.
- 2 Select **VNC viewer** for the type of source you want to add, then click **OK**.
- 3 Select either **VNC configuration file** or **VNC server**. If you select **VNC configuration file**, choose the proper file. If you select **VNC server**, enter the name of the server.
- 4 When you're done, click **OK**.

8.2.7 Web page

- 1 Click **Add**, then enter a name for your source.
- 2 Select **Web page** for the type of source you want to add, then click **OK**.
- 3 Enter the URL for the page you want to view.
- 4 When you're done, click **OK**.

8.3 Settings

The properties enable you to change the settings for your sources. To view these settings, click the **Settings** () icon.

8.3.1 General

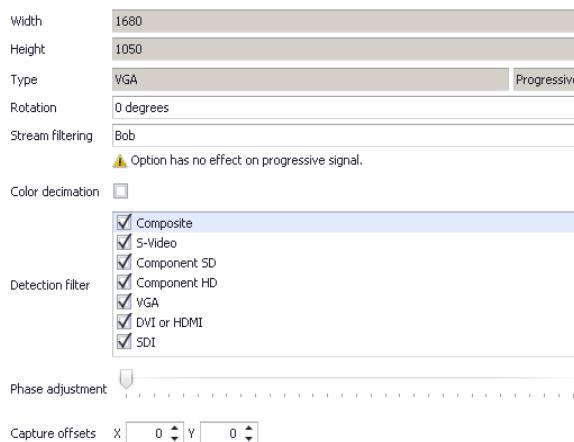
This provides the general settings for your sources.



Note: Depending on the driver you're using, certain options may not be available.



Note: Depending on the blending type selected, the options available may change.



Width and Height

Specifies the width and height, in pixels, of your source. These fields can't be modified.

Type	<p>Specifies the type of connection or source file used by the stream. The possible types are:</p> <ul style="list-style-type: none"> ▪ Component () ▪ Composite () ▪ DVI () ▪ HTML5 () ▪ Image () ▪ IP () ▪ PowerPoint () ▪ SDI () ▪ Source touring () ▪ S-Video () ▪ VGA () ▪ VLC () ▪ VNC () ▪ Web page () ▪ No source () <p>Also, it specifies if the stream is interlaced or de-interlaced.</p>
Rotation	Change the orientation of your source. Choose from 0 degrees , 90 degrees clockwise , 180 degrees , and 90 degrees counterclockwise .
Stream filtering	This indicates the de-interlacing option used for the input source. The following de-interlacing options are supported: Bob , Weave , Single field , and Adaptive . Adaptive filtering isn't supported while using an SDI connection type. Stream filtering options have no effect while a progressive input signal is detected.
Color decimation	When enabled, this reduces the colors of the stream from RGB to YUV, and improves performance.
File or URI	Browse to the proper folder or URI protocol path of your source.
Detection filter	Detect according to the type of connection (Composite , S-Video , Component SD , Component HD , VGA , DVI or HDMI , or SDI).
Phase adjustment	This is the input phase adjustment for the selected stream. Values range between 0 and 31. This option is supported only with VGA sources.
Capture offsets	Set the X or Y position of your capture. This option is supported only with VGA capture.

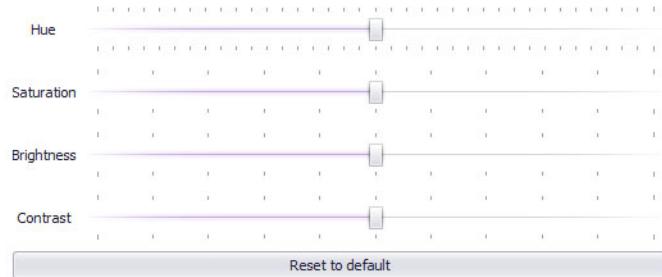
8.3.2 Cropping

Use this to adjust the size of your source. Enter the values, in pixels, to crop the **Left**, **Right**, **Top**, and **Bottom** sides of your source.

Click **Reset** to restore window cropping settings to their default values.

8.3.3 Color correction

This enables you to adjust the color settings of your source.



To reset the values to their original levels, click **Reset to default**.

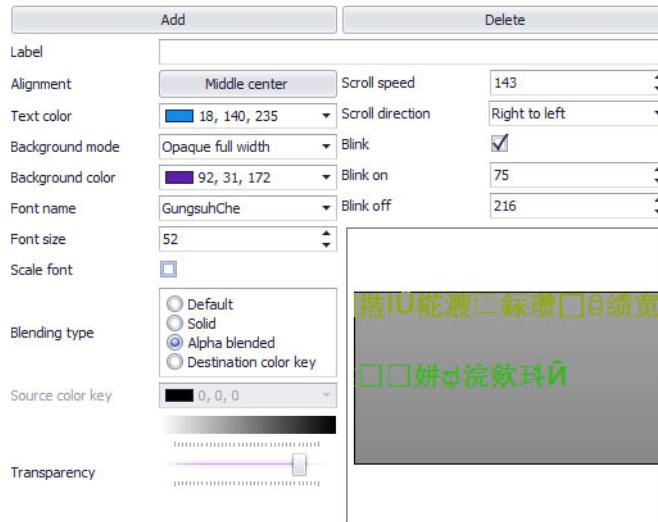
Hue	Increase or decrease the tint or tone of the colors.
Saturation	Increase or decrease the depth of the colors.
Brightness	Increase or decrease how light or dark the colors appear.
Contrast	Change the difference in brightness between the lightest and darkest colors.

8.3.3.1 Text overlay



Note: Depending on the driver you're using, certain options may not be available.

Provides full control of your text overlays by enabling you to adjust settings such as the color of the text, the name and size of the font, the placement of the text, and the scroll speed.



To customize the look of your text overlay, you can adjust the following settings:

Add, Delete	To add a text overlay, click Add , then enter your text. To delete a text overlay, select the text you want to delete, then click Delete .
Alignment	The placement of the text overlay relative to the window. The possible values are: Top left , Top center , Top right , Middle left , Middle center , Middle right , Bottom left , Bottom center , and Bottom right .
Text color	The RGB color of the text overlay. To select a color, click the color button.
Background mode	The background mode for the text overlay. The default is Transparent . You can select one of the following options: <ul style="list-style-type: none">▪ Transparent – No background.▪ Opaque – Background is limited to behind the text.▪ Opaque full width – Background covers the entire width of the video output.

Background color	The RGB color used with an opaque background. If a transparent background is used, this value has no effect. To select a color, click the color button.
Font name	The font used for the text overlay. You can only select a font installed on your appliance.
Font size	The size of the font used for the text overlay. The default point size is 24 .
Scale font	Enable this option if you want to scale the font proportionally to the size of the window.
Scroll speed	The scroll speed for the text overlay, in the number of pixels the text overlay is moved per frame per second. The default is 0 .
Scroll direction	The scroll direction for the text overlay (Left to right or Right to left).
Blink	Enable this option if you want your text overlay to blink.
Blink on and off	This sets the blinking rate (on and off) for the text overlay.
Blending type	Select one of the following blending types: <ul style="list-style-type: none"> ▪ Default – The image is opaque. This is the default setting. ▪ Solid – The image is opaque. ▪ Alpha blended – The image is blended with the source content. ▪ Source color key – The image is opaque. The image content that matches the source color key is transparent. ▪ Source color key and alpha blended – The image is blended with the source content. The image content that matches the source color key is transparent. ▪ Destination color key – The content that matches the color key is replaced with the corresponding pixels from the source content.
Color key	Either Source color key or Destination color key , depending on the blending type selected.
Transparency	Select the transparency level of your text overlay.

8.3.4 Image overlay

You can use an image as an overlay over the video input. The image overlay is used over the video input at its original resolution.



Note: This option is available only if an image has been uploaded to your appliance.

To upload images to your appliance:

- 1 Enter a URI or browse to *C:\ProgramData\Matrox Graphics Inc\Window Manager*. (If this folder is hidden, see your Windows documentation for information on how to show hidden folders and files.)
- 2 Under **Window Manager**, create a folder called *Images*, and copy your images to this folder. (MuraControl software supports PNG and BMP file formats.)

After images have been uploaded to your appliance:

- 1 Launch **MuraControl**.
- 2 Under **Sources** → **Settings** → **Image overlay**, select the image you want to use, then enter the **Position** (**X**, horizontal and **Y**, vertical) for your image.
- 3 When you're done, click **OK**.

8.4 Inactive stream

This option lets you determine how an input source will behave when a connection is lost.

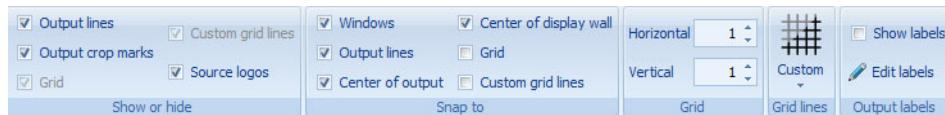
Action type	<ul style="list-style-type: none">▪ Default – Displays a solid color (black).▪ Color fill – Displays a solid custom color.▪ Default image – Displays the default image.▪ Custom image – Displays a custom image.▪ None – No action occurs when the stream is inactive.
Action trigger	<ul style="list-style-type: none">▪ Detection – When the stream is detected as being inactive.▪ Inactivity – When the stream is redetected.

8.5 Show side panel

With this feature, you can quickly switch between sources already created. Click the **Show side panel** (➡) icon to view a list of your sources on the left-hand side of the screen. Selecting a source from the side panel automatically applies it. You can also drag a source from the list to a window to apply that source.

9 View

This section explains how to create grids and grid lines to help you better position your windows and configure your layout.



9.1 Show or hide

This enables you to show or hide the output lines, grid, and custom grid lines on your canvas.

9.2 Snap to

When you create a layout, this feature enables your windows to snap to an object in your layout when you move your windows.

Windows	This snaps the windows snap to one another.
Output lines	This snaps the window to the lines of the output.
Center of output	This snaps the window to the center of the output. The window must be smaller than the output window.
Center of display wall	This snaps the window to the center of the display wall.
Grid	This snaps the window to the grid lines.
Custom grid lines	This snaps the window to the grid lines you specified. For more information, see “Grid lines”, page 34.

9.3 Grid

This enables you to add vertical and horizontal lines to your grid.

9.4 Grid lines

This option enables you to specify the exact position for your grid line.

To add a vertical or horizontal position for your grid line, click the **Add** (+) icon, then enter the position (in pixels).

To delete a custom grid line, click the **Delete** (X) icon next to the grid line you want to delete.

9.5 Output labels

This option allows you to show or edit the labels of your outputs.

Show labels	Enable the Show Labels option.
Edit labels	Click Edit labels , enter a new name for the output you want to edit, then click OK .

10 Schedules



Note: Depending on the driver you're using, certain options may not be available.

This option enables you to schedule your layouts to automatically change at specified times.

From the **Schedule** list, select the schedule you want to use. If you don't want to use a schedule, select **None**.

10.1 Recurring layouts

10.1.1 Interval

Choose this to have selected layouts change at regular intervals.

- 1 Choose an existing schedule or click **Add** to create a new schedule.
- 2 Select **Interval**.
- 3 Set the **Interval** speed, in seconds, to determine how fast you want your layouts to change.
- 4 From the list of **Layouts**, select the layouts you want to use, then move them to the **Selected layout** list.
- 5 When you're done, click **OK**.

10.1.2 Weekly

Choose this to have selected layouts change on scheduled days and times.

10.1.2.1 Adding a new item to the schedule

- 1 Click the **Add** () icon.
- 2 Set the **Layout**, **Day**, and **Time**. To change these settings, you can also click the **Settings** () icon next to the item.
- 3 When you're done, click **OK**.

10.1.2.2 Deleting an item

To delete an item from the schedule, click the **Delete** () icon next to the item.

10.1.2.3Renaming an item

To rename an item, click **Rename**, enter a new name for your item, then click **OK**.

10.2Scheduled layouts

The **Calendar** feature enables you to create a list of scheduled layouts.

10.2.1Adding a new item to the calendar

- 1 Click the **Add** () icon.
- 2 Set the **Layout**, **Day**, and **Time**. To change these settings, you can also click the **Settings** () icon next to the item.
- 3 When you're done, click **OK**.

10.2.2Deleting an item

To delete an item from the schedule, click the **Delete** () icon next to the item.

10.2.3Renaming an item

To rename an item, click **Rename**, enter a new name for your item, then click **OK**.

11 Troubleshooting

11.1 Common problems and solutions

This section addresses common problems that could prevent you from using your system or product.

Problem **Unable to connect to a controller**

Cause Communication to the controller isn't being properly established.

Solution Your Matrox MuraControl software communicates through the telnet port of the Mura controller via TCP-IP. This means that an IP connection from the client needs to be established with port 23 of the controller.

To ensure proper communication, we recommend you do the following:

- Make sure the firewall on both your local and remote systems is properly configured.
- Check the IP configuration of both your local and remote systems.
- Check the physical or wireless network connection.
- Check the configuration of the routers and switches between your local and remote systems.

If problems persist, contact your network administrator.

12 Appendix – Creating a display wall layout

Creating a display wall layout involves adding a new layout, adding one or more windows to your layout, selecting a source for your windows, and making your layout active.

12.1 Step-by-step configuration

This section takes you through the step-by-step configuration of your display wall layout.

12.1.1 Create a new layout

When you start MuraControl for the first time, you'll be prompted to create a new layout. To be able to use MuraControl, at least one layout is required.

To create a new layout:

- 1 Under **Layouts**, click the **New** () icon.
- 2 When prompted, enter a name for your new layout.
- 3 When you're done, click **OK**.



Note: If you don't enter a name for the layout, a default name is assigned. The default name assigned to a layout is **New layout**. The name field can't be left blank.

For specific information about layout settings and options, see “6 - Layouts”, page 13.

12.1.2 Add a window

To add a new window to your layout:

- 1 Under **Windows**, click the **Add** () icon. If no free space is available on the display wall, other windows will be resized and moved to make room for the new window.
- 2 Repeat for every window you want to add.

For specific information about window settings and options, see “7 - Windows”, page 18.

12.1.3Select your source

To select a source for your windows:

- 1 Select a window from your layout.
- 2 Under **Windows**, go to the **Sources** drop-down menu.
- 3 From the drop-down menu, select a source for your window.

For specific information about source settings and options, see “8 - Sources”, page 24.

12.1.4Make your preview layout active

When you’re done, click the green check mark () icon to set the preview layout as the active layout on the display wall.

13 Notes

13.1 General

This section provides more information on issues related to your software.

- Universal Plug and Play (UPnP) is supported with Matrox driver version 2.03 or later.

13.2 Sources

This section provides more information on issues related to sources.

13.2.1 VNC

- MuraControl supports RealVNC viewer version 5.0.3 or later.
- If you specify only a server name, the window automatically scales to fit the wall, regardless of the aspect ratio of the VNC session.

13.2.2 Microsoft PowerPoint

- MuraControl supports Microsoft PowerPoint Viewer 2010 with Service Pack 1 only.



14 Customer support

14.1 Matrox Web

Our Web site has product literature, press releases, technical material, a sales office list, trade show information, and other relevant material. Visit the Matrox Graphics Web site at www.matrox.com/graphics.

14.2 Technical support

Matrox values your business and offers professional support for your Matrox product. If you have a problem, we recommend you follow the procedure below for the quickest results.

- 1 **Contact your integrator** – This is usually the quickest and most effective method of technical assistance. Your integrator is familiar with your complete system. In the case of hardware warranty assistance, the product must be returned to the integrator, who will return it to Matrox.
- 2 If your Matrox product was provided by your computer manufacturer, contact this manufacturer. For contact information, see your computer documentation or contact the vendor.
- 3 **Direct Matrox technical support** – If you still can't resolve a problem (and your Matrox product wasn't provided by your computer manufacturer), you can get technical assistance by contacting Matrox technical support at dwcsupport@matrox.com.

14.2.1 Information we need

Please give a complete description of the problem, and include:

- Matrox card serial number, model number, revision number, BIOS number, driver type and version, and memory address at which the Matrox card is installed.
- Computer brand and model name.
- Monitor brand and model name.
- Operating system, version, and service pack.
- Brand and model of any other cards and devices installed on your system.

14.2.2Program specific problems

If a problem appears with a specific program, please give us the following information:

- Display settings (color palette, display resolution, and so on) applied when the problem occurs.
- If possible, take note of the file and segment address that caused the problem.
- Detailed steps known to cause the bug, so we can reproduce it.

The USB dongle used for Matrox MuraControl for Windows has the following regulatory certifications:

USA

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WARNING Changes or modifications to this unit not expressly approved by the party responsible for the compliance could void the user's authority to operate this equipment.

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AUSTRALIA

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Due to the physical restrictions of the device, evidence of conformity is demonstrated in the present document and on the product packaging.



JAPAN

VCCI Compliance Statement

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取扱説明書に従って正しい取り扱いをして下さい。

VCCI-B

KOREA

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EUROPE

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(Italiano) Informazioni per gli utenti europei – Dichiarazione di conformità

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